Report to the UniBRAIN Agribusiness Innovation Incubator Consortia based on UCPH roundtrip to Ghana, Kenya, Uganda and Zambia during October/November 2012

Hjortsø, Carsten Nico Portefée; Totojani, Anika

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by

Carsten Nico Hjortsø and Anika Totojani

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Department of Food and Resource Economics
University of Copenhagen

Summary

The present report is based on visits to five of the UniBRAIN AIICs during October-November 2012. The purpose of the report is to contribute to the peer-learning among the AIIC partnerships. The purpose of the first visits to the AIICs was to introduce the UCPH team and discuss how the process of exchanging experiences is best support. Moreover, opportunities for establishing research collaboration addressing the process of establishing and managing the AIICs were also discusses.

The report summarizes some of the topics and concerns that have been discussed during the visits. Since few experiences regarding incubator management and curriculum development based on the incubator engagement exists at this point in time, we have aimed to highlight a number of topics that have been raised by interviewees. The purpose is to identify potential topics for discussion during the UniBRAIN partnership meeting and beyond. Hopefully, some of these topics will enable the AIICs to address implicit assumptions made and turn these into explicit decisions. We also hope that the topics can facilitate a discussion aimed at identifying which aspects of the incubator management and curriculum development what we should focus on in order to facilitate mutual learning among the AIICs. Moreover, we hope that the questions can inspire those that want to document the AIIC experiences by providing inspiration for research question formulation.

Content

1. Introduction

The Universities, Business and Research in Agricultural Innovation (UniBRAIN) programme has emerged out of the recommendations of the Danish Africa Commission. The overarching goal of UniBRAIN is "to promote innovation and produce graduate with entrepreneurial and business skills and research-based knowledge that is relevant to the development of African agriculture and agribusiness." The inception phase started in 2010 and the implementation phase started in January 2012. UniBRAIN supports six agribusiness innovation incubator consortia (AIICs) challenged with the tasks of a) creating linkages between universities, agribusinesses and agricultural research institutions, b) enabling university members of the AIICs to draw on experiences and contacts obtained through the AIICs to enhance agribusiness educations, and c) networking with the other AIICs to exchange lessons learned, business concepts and improve pedagogics in order to up-scale successes and best practices.

The six incubators work with important African value chains including: Coffee (UniBRAIN-CURAD in Uganda), Banana (UniBRAIN-ABP in Uganda), Sorghum (UniBRAIN-SVCDC in Kenya), Livestock (UniBRAIN-CCLEAr in Ghana), Agro-forestry (UniBRAIN-CAF in Mali), and Fruits and Vegetables (UniBRAIN-AgBIT in Zambia).

Networking and knowledge sharing within and between the AIICs may be a challenge due to institutional and geographical factors. Danida has contracted UCPH to support this knowledge sharing process in order to enhance the concrete educational and economic impact obtained through the UniBRAIN initiative.

The purpose of the consultancy is to analyse and minimise barriers to the implementation of the UniBRAIN programme and improve its impact by enhancing the learning process of the six AIICs. This is done by capturing participants' experiences and by facilitating a discussion of lessons learned across the programme. The study will address the incubators' efforts according to two dimensions corresponding to two of UniBRAIN's main objectives:

- How are agribusiness product, service and process innovations supported and promoted by tripartite incubator networks comprising universities, research institutions and private enterprises?
- How can universities, based on the experiences from participating in the tripartite incubator networks, develop agribusiness curriculums that facilitate graduates' leaving university with entrepreneurial and business skills?

The consultancy is headed by Associate Professor Carsten Nico Hjortsø (CNH), Department of Food and Resource Economics, UCPH, and involved contributions from two-three otherwise funded PhD students from the same department. The consultancy will involve three visits to AIICs during 2012-13. The present report is based on the first of these visits. CCLEAr was visited in October 2012 and JKUAT, ABP, CURAD, and AgBIT were visited in November 2012 (see Appendix 1 for a list of interviewees). During the visits interviews were held with the university, research, business and civil society partners involve in each consortium. Due to the political situation in Mali, this country could not be visited.

The purpose of the visits was to:

1) Present the purpose of the consultancy and discuss how the investigation could be carried out
2) Interview partners about their experiences with the process of establishing the partnership and designing the AIIC
3) Interview university partners about their plans for integrating experiences from the incubator project into the university curriculum
4) Investigate opportunities for research collaboration between AIICs, ANAFE, UniBrain and UCPH

In addition, meetings were held with ANAFE during the visit to Ghana in October to discuss the development of a research programme to coordinate the documentation and knowledge sharing effort made by AIICs, ANAFE, UniBRAIN, UCPH and others. Appendix 2 provides a tentative list of potential research topics associated with incubation and incubator management, and entrepreneurship.

The first round of visits were implemented at the point in time when most of the AIICs were about to obtain the final approval of their business plans and receive funding for floating the projects. The visits therefore primarily aimed to document the partnership formation process and surface anticipated concerns about managing the implementation. These concerns are considered important input when identifying focus areas for future knowledge sharing and support.

Individual interviews were held with partners to obtain their experiences during the consortium design and planning phase. Appendix 4 provides a story line use for semi-structured interviews aimed at documenting participants experiences. During the same interview session, partners are asked to identify the assumptions, claims, and issues that concern the participants and that they find important for ensuring the incubator success, or which they could be interested in learning about by collecting data on throughout the implementation phase (see Appendix 3 for an interview guide).

We believe that assumption surfacing is an important element in critical thinking and good management practices. By making explicit and questioning the assumption underlying important management decision, decision makers make sure that they are better prepared for the unexpected events that will surely come. During the conversations with the five partnerships a number of different topics concerning one or several partners were raised.

In the following, we will address these issues by outlining the issue, concern or dilemma and identify a question that can be used to stage a discussion about a given aspect. We do not intent to promote any specific solutions here. It is our impression, that the institutional context and nature of the specific business and the partner constellation the five visited AIICs are so different that universal solutions are difficult to prescribe. In many cases the answer is not an ‘either/or’ solution but rather a question of finding a balance that suits the partners and fits the organisational environment in the specific context.

2. The incubation process

A review of the AIIC's business plans and discussions with the AIICs show that several of the business models developed are based on an interesting mix of traditional business incubator and accelerator services, value chain development interventions, and elements of franchising. This seems to be a logical consequence of:

1) the initial situation and available resources (focus on agriculture and on new technologies ready to be 'transferred' to smallholder farmers)
2) the socio-economic environment (need for improved primary production, poorly coordinated agribusiness value chains, lack of access to capital, weak entrepreneurial culture, etc.)
3) the requirement for the AIICs to become financial sustainable within the 4 year period of initial funding

There has been a strong requirement to design viable business models for the agribusiness AIICs. This process has been framed through the use of the Business Modelling Canvas developed by Osterwalder and Pigneur (2010). Forum for Agricultural Research in Africa (FARA) has facilitated the process that has involved consultancy support for from ABI-ICRISAT and a due diligence process prior to final acceptance of the AIIC plans. This has to some extent aligned the incubator concepts, but the models are still shaped significantly by the partners and their specific business and institutional environments.

All consortia visited have demonstrated extraordinary commitment and dedication towards the AIIC projects. The competitive process, a relative loosely defined call for proposals, combined with the seed money provided for enabling the project development phase seem to have allowed the consortia to designed business models based on the actual institutional conditions, partners' individual interests, and resources available to the partners.

2.1 Diversity vs. quality

AIIC business models display different levels of complexity. Appendix 5 shows the variation in client base, services, and revenue streams as outlined in AIIC business plans. A diverse set of services and a broad range of customer types may provide a range of opportunities for revenue generation. On the other hand, the broader the range of tasks and customer segments, the more complexity the management task. A wide range of engagements may delude management attention and prolong the learning process and capacity development within the incubator. Will diversifying activities be an advantage or disadvantage? Addressing to many client groups may cause the organization to lose its focus and inhibit development of expertise in dealing with particular costumer types.

- ***How broad a service offer and customer base can the incubator attend while at the same time provide the required quality and attention to each customer segment?***

2.2 For-profit will finance non-profit services

A strategy indicated by one of the AIICs is to initially offer services to clients, e.g. corporations, larger firms and SMEs, on a commercial basis in order to generate a revenue stream that can be used to develop low-revenue generation activities for university students and graduates.

- ***Will the incubator be able to generate the necessary profit and devote the necessary management attention to develop quality non-profit services while simultaneously engaged in for-profit service provision***

2.3 Commercial vs. non-commercial activities

One of the typical business model concepts - developed in different forms, but recognized in most of the visited AIICs - is value chain development through chain-wide up-grading orchestrated by the incubator functioning as a lead organisation that streamlines the supply chain and provides training for the raw material input producers and down-stream SME processers. Some of the business models are based on offering relatively fixed production technology to entrepreneurs, who are expected to implement the provided production model and subsequently share the obtained revenue with the incubator. The lead organisation develops a common brand name and assumes responsibility for marketing and sales operations. The business models and the framing in an incubator context seem to be innovative ideas in themselves and seem to have the potential to become financially viable constructions. But to what extent this approach will vary from a traditional value chain intervention and involve a potential for further entrepreneurial activity will depend on the implementation mode and the AIIC's ability to attract the right type of incubatees and the degrees of freedom these are given.

- ***What is the right balance between for-profit participation in commercial activities and more limited revenue-generation classical incubation activities (e.g. support to individual graduate entrepreneurs and SME) that can ensure long-term economic sustainable of the incubator?***

There is also a risk that commercial activities (necessary for obtaining financial sustainability) may attract the incubator management's attention to such a degree that alone-standing incubatees or start-up teams may miss out on the necessary hand-holding and attention from the incubator.

- ***Can the incubators make sure that commercial activities and mentoring/supervision of entrepreneurs are balanced?***

2.4 Entrepreneurial vs. managerial mindset

It may become a challenge that value chain upgrading and franchising schemes do not necessarily foster an entrepreneurial mindset. These approaches may provide opportunities for individuals to develop technical skills and to develop some business management skills. Enterprises can develop into sustainable businesses, crate jobs and contribute to wealth – all in line with UniBRAIN objective, but offering business models that are relatively well defined may have limited potential for fostering genuine entrepreneurship competencies in terms of capability for opportunity

recognition, opportunity development, market insight, problem solving, stakeholder management, etc.

- ***How can incubatees be introduced to a well-defined business concept, while attention is still paid to the development of entrepreneurial competencies and attitudes?***

The incubators need to consider if individual entrepreneurs, who are enrolled in the incubator to develop their own ideas, need to offered different services than entrepreneurs that aspires to become an owner-manager of a pre-defined business model in a value chain setting governed by a lead-organisation.

- ***Can the incubators design a service mix that accommodates the needs of both incubatees that prefer to develop individual business concepts and those that engage in a more predefined business model?***

2.5 Motivated by own vs. somebody else idea

Moreover, there is an inherent risk that entrepreneurs offered to develop an enterprise through a franchise model may lack the necessary motivation to carry through with the venture in time of hardship because they are running a business based on somebody else business concept and do not have direct ownership to the business idea themselves.

- ***What is the right balance between providing relatively predefined business solution and supporting entrepreneurs in developing their own solutions?***

2.6 Growth businesses vs. job seekers

Entrepreneurs will what to engage in the AIICs for several reasons, and the supported businesses may fall into three categories, depending on the entrepreneur's motivation: the job option/survival business (necessity entrepreneurs), the lifestyle business, or the growth business (opportunity recognition). When AIICs are providing pre-defined business model they may be more attractive to risk-averse job seekers rather than to risk-taking entrepreneurs whose ideas have greater employment and economic growth potential.

- ***How do the incubator ensure that incubatees are genuine 'growth business' entrepreneurs and not just 'employment seekers' that drain the AIICs for resources without creating additional value?***

2.7 Planning vs. action

One of the standing discussions in the entrepreneurship and management literature is between proponent of business planning (causality) or action (effectuation) as key to success. The underlying question is to what extent you should/can plan your way out of uncertainty (risk averse behaviour) or if you should engage in action and be prepared to adapt activities through a learning-by-doing (risk taking behaviour) process. Several interviewees mention that the UniBRAIN planning process has taken more than two years engaging the partners in a very time consuming and demanding planning effort. They refer to this as an illustration of the different logics governing the business and the academic world. Entrepreneurship is about risk taking. It's also about trying out your idea;

learn from failing; and doing it better next time. On the other hand, there is no doubt that some level of planning pay off. The AIIC have an in-build paradox in having to embrace both an effectual culture (the business representatives) and a causal culture (academics and researchers).

- ***How will AIICs support their incubatees in finding an adequate balance between causation and effectuation that allows for rational decision making and simultaneously emphasise action and risk taking?***

2.8 University/research vs. business environment

In general, the organisational cultures of the three types of partners (business, university and research) are governed by different values, norm and attitudes. It is likely that the incubatees will be influenced by the location of the incubator. Some interviewees raise a concern whether university-based incubators will be flexible enough (in term of speed and authority of decision making) to take advantage of the business opportunities? Will incubators placed in a business environment be able to take advantage of services offered by the research and university partners?

- ***Will the physical location of the incubator facility influence the efficiency?***

Associated with this aspect is a concern raised by several of the research and university partners who initially contributed to the development of the AIIC concepts and business plans. How would they be able to maintain a connection with the AIIC once these were established and being managed as independent businesses? To what extent would the ideas fostered among the 'founding fathers and mothers' survive when they were no longer directly involved in the management of the incubator? Would the individual time and commitment invested in establishing the incubator pay back in terms of opportunities for personal development or upgrading of research facilities? In some of the AIICs' organizational structures this issue was addressed by establishing Technical Boards/Committees as a support functions for the incubator Board and Management Team. The Technical Committee members would also be given priority for short-term (less than three work-days) consultancy tasks needed by the incubator. In general, considering the optimistic requirement of achieving financial viability within 3-4 years it seems critical to maintain a high level of goodwill among all involved parties, and strategies ensuring that the incubators are thoroughly anchored within the staff of the participating organizations seem to be important to consider.

- ***While becoming independent commercial organizations, how can the AIICs then at the same time ensure that they remain well anchored within the participating organisations and that they maintain strong links to involved scientists and researchers?***

2.9 Mentor motivation

The question of whether mentors should be paid or not for their service was also raised during discussion. Different attitudes were found and there is probably no right answer to this question, but it seems that not paying or only covering expenses is the most used approach. Mentorship is a complex matter. In relation to entrepreneur development the following definition of mentorship particular is useful:

"… a protected relationship in which learning and experimentation can occur, potential skills can be developed, and in which results can be measured in terms of competencies gained rather than curricular territory covered."

The mentor provides to the mentee with career related support as well as psychosocial support; a role model; and access to personal and professional networks. The relationship between mentor and mentee and match making is an important issue. The literature suggests that prospective mentors are screened according to established criteria; that matching of mentors and entrepreneurs is based on relevant criteria; and that mentors are trained to be mentors. It is important that the mentor has the right inter-personal skills (listening) and that the right match is made between mentor and mentee. The parties must want to have a relationship, and the relationship should be characterised by mutual trust, mutual respect and mutual freedom of expression. The case study on the AfricaGrowth incubator illustrates the use of mentors and addresses some of the arguments for not paying mentors.

- ***Will payment of mentors for mentoring incubatees influence the relationship between the mentors and mentees or/and the support provided by the mentor?***

Case study

The GrowthHub – a private for-profit incubator in Nairobi

The GrowthHub is a private business incubator in Nairobi recently started by Johnni Kjeldsgaard and Ian Lorenzen, two Danish entrepreneurs. Both have a history as entrepreneurs in East Africa going back to the late 90ties. Through their company GrowthAfrica Consulting they also work as consultants for Danish and Kenyan firms and provide market- and soft-landing services for Danish firms who want to establish themselves in Kenya or Danish-based firms looking for Kenyan suppliers. Consulting and The GrowthHub employes 15 permanent staffs and presently have four international interns and three local interns.

The GrowthHub have just concluded on a four months accelerator program implemented in partnership with the US organisation Village Capital. This program had 18 start-ups with 35 entrepreneurs (resident Kenyans, five non-Kenyans and two Kenyans returned from abroad). Two firms are registered outside Kenya. Start-ups are related to high tech, health care, energy, agriculture and manufacturing. Graduates are between 25 and 55 of age. The start-ups are from 'in pilot' to 'just before in operation' when entering the program. In fact, the programme is a mix of incubation and business acceleration. In this kind of the programme the main service offered relate to the management dimension rather than to technical or service aspects. Businesses enrolled in the incubator are expected to have some level of social impact. The incubator has office space for 22 resident entrepreneurs. Some have rented office space, and for the rest the program is more like a virtual incubator.

The GrowthHub charges USD 400 per participant for the four month acceleration. They argue that potential incubatees have the attitude that if it is for free, it is not valuable. Johnni and Ian also emphasise, and have made this explicitly to the incubatees, that when they pay, they can also demand something from The GrowthHub.

The selection process was initiated with a call and communication throughout The GrowthHub's wide business network and personal contact. The first call received little attention, and only 15 applications were received. Despite an impressive advertisement saying "Apply now and you'll get $ 100,000", they only got 15 applicants. After a more

intensive marketing and five information meetings 80 start-ups submitted an application. Applications were reviewed, and 40 were short-listed based on criteria such as: the constellation of the team, their management skills, ambition and commitment, and the business plan. Short-listed entrepreneurs were invited to give a pitch and interviewed individually. In addition, a group interview was made with each applicant by 4-5 other applicants while being observed by The GrowthHub staff. Based on this, 19 start-ups were admitted access to the programme. One company dropped out during the program.

The GrowthHub emphasises that incubation is a peer-learning process. They have experienced this approach as very valuable since different start-ups have different challenges, and different professionals can contribute with different perspective, often questioning taken-for-granted assumptions. The group interview aims to ensure that selected incubatees have the social skills to contribute to this peer-driven approach. If it is obvious from the interview that individuals do not react constructively to being challenged by other peers, they are not considered for the programme. This is also way to see if candidates can manage being under stress, something they will experience many time when developing their business.

The four-month incubation programme involves six three-day Friday-to-Sunday workshops. They bring the incubatees through a structured action-oriented learning and reflection process based on guiding sheets (templates) and business tools addressing different topics in business development. They call the methodology 'The Value Compass'. This tool consists of 20-30 themes that help the incubatees consider how s/he can successfully create value for stakeholders. Each theme is presented on an A3 size sheet, providing relevant sub-topics and guiding questions. Management topics are introduced and discussed during the workshops, and participants are asked to go back to their management team and develop answers for this topic before the next workshop. In the next workshop participants present the result and discuss it with a group of peer incubatees. The Value Compass is not considered to be a 'textbook', but rather a thinking-tool. The idea is that the participants can fill in their thoughts in the sheets, as well as those of the team with whom they discuss it during the workshops, and hang them on the wall when they return to the rest of the start-up's management do discuss and reflect on what has been focused on during a given workshop. In this way, the Value Compass approach aims to ensure that not only the team member that participate in the workshops get value, but that the rest of the start-up team (not participation in the programme) is also actively involved in the incubation process.

Each incubtee is teamed up with an external business mentor. The mentors are expected to be motivating, be listening to the incubatees, provide focus, and help the incubatees through their networks. A mentor-mentee day is organised where, on the one hand, persons interested in becoming mentors presents themselves, and, on the other hand, incubatees pitch themselves and their idea. Both parties are asked to make a prioritised list of whom they prefer to be teamed up with. Based on this, The GrowthHub teams up the mentors and incubatees. The have good experiences with this approach and they almost managed to honour everybody's first priorities.

Mentors are never paid. The GrowthHub emphasises that the mentor-mentee relationship should be based on a social contract and willingness to share knowledge. If mentors are paid, the relation takes on the characteristics of a consultancy, based on a commercial contract. The mentors might be motivated by an opportunity to invest in the start-up or they might be offered a 1 % share of the company for joining the Board of Directors if the relationship evolves satisfactory. The type of mentors that The GrowthHub looks for are not 'big' names. Rather they prefer solid 'engine room' guys.

The incubator also offers in-house supervision by the GrowthHub staff. Moreover, a financial advisor is provided who elaborates a financial plan together with each start-up. Financial aspects are covered by to financial associates from the US who supports each entrepreneur individually. The GrowthHub also provides services such as bookkeeping support.

This specific incubation programme ends with a final pitch-party where The GrowthHub and Village Capital each have put up a price of USD 50,000 (in terms of convertible debt) for the two best entrepreneurs. What is unique to this programme is that the two winners are selected by the fellow start-ups participating in the program. The start-ups score each other on six criteria covering the key aspects of the start-up

The GrowthHub can be used to discuss different aspects of the incubation process and the incubatee-incubator relationship. The case can be used as a starting point for a discussion about:

- Incubators pricing policy – what do we charge, from whom and why?
- Mentor program management – what do we require and expect from our mentors? How are they selected? Should they be trained? How are mentors teamed with entrepreneurs?
- The incubator community – How do incubatees benefit from each other? Do we recognize and involve the team behind the incubatees?
- The incubation process – how long time should we incubate? Which rules have we established for graduation?
- The Incubation tools – what tools and templates can be useful for structuring the incubation process?

3. Curriculum development

The UniBRAIN initiative's objective no. 2 is concerned with the integration of experiences obtained through the AIICs into the agribusiness curriculum in order to support tertiary educational institutions in producing efficient entrepreneurs.

In several cases, university staff emphasized that the UniBRAIN initiative have provoked a paradigm shift in the 'non-business' researchers' outlook and it is increasingly recognized that disciplinary research has to be link with demand, market opportunities and up-stream value addition.

In several of the UniBRAIN partner universities, entrepreneurship teaching is already an integrated part of the educations, but often offered by other departments than the Agribusiness. In most of the involved universities, the agribusiness education is closely linked with agricultural economics and the teaching is often oriented towards business plan development and emphasizes economic elements.

In relation to higher education, it may be a challenge to find a balance between focusing, on the one hand on entrepreneurs creating their own enterprise, and on the other hand developing creative and enterprising employee that can create value within existing organizations. Several partners confirmed that few agribusiness students explicitly aim to become entrepreneurs. Even in a specific entrepreneurship Master's programme, the programme responsible emphasized that only a minority of the students had considered becoming entrepreneurs themselves. Job security and to obtain an academic degree is a more important driver than the prospects of venturing into business. This might indicate that educators should aim to find a balance between teaching business knowledge and business planning, on the one hand, and more generic personal competencies that support intrepreneurship (people with an entrepreneurial spirit working within an organisation) and innovation in existing organizations.

Allan Gibb from University of Durham, UK, has an interesting authorship on entrepreneurship education and the changes that the increasing emphasis on entrepreneurship in higher education

leads to. He looks at entrepreneurship in a very inclusive way. Creating new businesses is one outcome of enhanced entrepreneurial mindset among higher education students and educators. But a range of other effects exists of an effort to make students more enterprising, i.e. creative, initiative taking, autonomous, etc. (see Figure 1). Especially in the case where entrepreneurship education is contextualized in disciplinary areas such as food science and agriculture, it seems very relevant to consider how students can be supported in developing behavioural capacity that enables them to contribute with their disciplinary knowledge to innovation processes as future employees.

- ***What is an appropriate outcome focus and what are the required behavioural competencies that produce agribusiness entrepreneurs and innovators?***

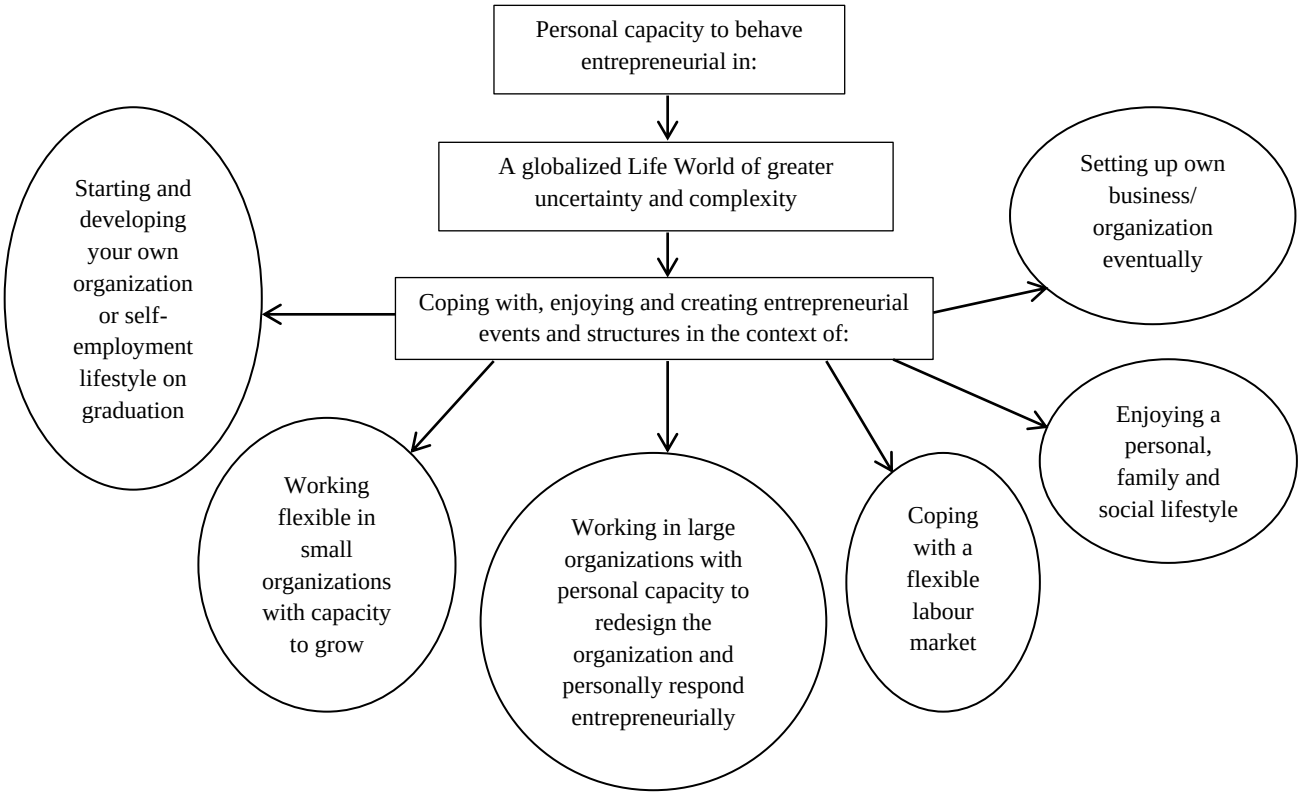

Figure 1. A framework for entrepreneurship education (Gibb, 2010:152)

Having defined the competencies and learning outcomes, it is also a challenge to design the pedagogical approaches that can benefit from the experiences obtained in the AIICs. An obvious link exists where teachers involved in AIIC activities as teachers, trainers or consultants develop their business insight and subsequently use this knowledge in their university teaching. An interesting question to be answered as practical experiences begin to emerge is:

- ***How can AIIC experiences support a range of different learning outcomes in higher education?***

But several other linkages can be envisioned. An example was provided by JKUAT. This example also illustrates how learning progression in the innovation and entrepreneurship education is considered. At JKUAT, students in the second year do an internship in an external enterprise or organization. Students have an external supervisor but their activities are also monitored by a university staff member. In the third year, students have an 8-week internship which is used to identify and describe problems in an organization. In the fourth and final year the student can choose to address the problems they identified in the previous internship and develop a research project based on this. Part of the thesis work is to develop a project proposal aimed at improving the problem situation (an innovation) based on a proposal writing template. The proposal is handed in and also subject to an oral presentation. The plan in to continue this progression by letting students develop business plans based on their project proposals. Based on a business plan competition the best of these business plans are identified and students will be offered the option to become incubatees in the SVCDC agribusiness incubator. Collaboration with the Research, Production & Extension Division at JKUAT enables the incubator to offer the best business plans seed money.

Achieving a more entrepreneurial and business-oriented mindset among agribusiness students may be based on changes in curriculum, but it may also happen through changes within the existing structure without formal curriculum change. By simply modifying the pedagogics some of the outcomes may be achieved. On the other hand, the existing examination formats and not the least the students' expectations can constitute a major challenge to change.

- ***What kind of formal and informal changes can be implemented to enhance agribusiness students' entrepreneurial mindset, and what will be the barriers and facilitators of such changes?***

Typically, interesting innovations take form when inter-disciplinary or cross-disciplinary teams work efficiently on a challenge together. It therefore becomes important to consider opportunities for staging cross-departmental team work and collaboration.

- ***To what extent is cross-departmental collaboration between staffs and between students possible, and how can this contribute to enhance the agribusiness students' entrepreneurial mindset?***

Some universities were observed to require an entrepreneurship course for all its students and some don't have specific entrepreneurship courses, but offer elements of entrepreneurship within other courses.

4. Partnerships and networks

The development of the AIIC partnership was addressed in the interviews with all partners. In general it seems to have been relatively unproblematic to form the partnerships. The different decision making cultures in public and private organizations have coursed some frustration when decisions have taken time to reach, but often this is more a question of internal decision making

procedures and practices in the public institutions. Good communication and conflict management skills have been mentioned as an important competence when managing these kinds of negotiations.

It is often mentioned that the seed funding has been instrumental in driving the process, for example by allowing partners to meet and work together for several days, often in an external location where they were not disturbed by ongoing activities. This opportunity has been a significant means of forming the common understanding and of obtaining quality input from involved partners. Several interviewees have raised concerns about the future role of the initial contributors when the AIICs are established as private enterprises. Moving from a 'project mode' to a 'business mode' of organization may be a challenge to the ongoing inclusion of partners' resources in the development of the incubators and support of the incubatees:

- ***To what extent will the incubator enterprises be able to benefit from the competencies and resources available within the partnership, and what processes and mechanisms will support an effective collaboration?***

Part of the interviews conducted was a mapping of each partner's personal and professional network of perceived relevance for the incubator activities. It is clear from this mapping that the partnerships have access to quite extensive networks of public and private actors in each AIIC. The development and use of these networks will be subject to a longitude study looking at:

- ***How will individual partner networks be utilized to support incubatees and incubator activities and how will incubator managers be able to benefit from partners' network?***

5. References

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Appendix 1 - Time schedule for visits to UniBRAIN AIICs

Date	Time	Meeting with	Incubator	Location/Address
2/10/12	09.00-13.00	Dr. Esther Marfo-Ahenkora Dr. Charles Domozoro Dr. Vincent Ansah Botchway	CCLAr	Council for Scientific and Industrial Research (CSIR) - Animal Research Institute
2/10/12	13.00-14.00	Dr. Roland Kanlisi	CCLAr	CSIR/Heifer International
4/10/12	10.00-12.00	Dr. Magaret Sumah	CCLAr	Ministry of Food and Agriculture (MFA)
5/10/12	08.00-15.00	Mr. Jonas Osafo-Adamu	CCLAr	Humbeg Farms
8/10/12	13.00-15.00	Dr. Irene Susana Egyir Dr. Akwasi Mensah-Bonsu Dr. Boniface B. Kayang Dr. Fred Y Obese	CCLAr	Dept. of Animal Science and the Dept. of Agricultural Economics and Agribusiness, University of Ghana (UG)
8/10/12	10.00-12.00	Dr. Pia M. Chuzu Kaj Björk Ralph Von Kaufmann Kofi Adin	-	FARA
8/10/12	18.00-20.00	James Aucha Aissetou Yaye	-	Hotel
10/10/12	10.00-12.00	Dr. Emmanuel Adu Dr. Esther Marfo-Ahenkora	CCLAr	CSIR
Kenya	**Time**	**Meeting with**	**Incubator**	**Location/Address**
12/11/12	09.00-15.00	Prof.Christine Onyango Prof. Daniel Sila	SVCDC	JKAUT
13/11/12	10.00-12.00	Prof. Christine Onyango	SVCDC	JKAUT
	12.00-13.00	Dr. Henry Bwisa	SVCDC	JKAUT
	14.00-14.20		SVCDC	JKUAT BoD meeting
14/11/12	09.00-11.00	Mr. Peter Okutoyi Mr. Fred Oduke Mr. Kepha B. Rinsyi	SVCDC	Agritrace
	11.00-12.30	Mr. Henry Oketch	SVCDC	Interim-CEO
	13.00-15.00	Mr. Micheal Malokha	SVCDC	FASI
15/11/12	09.00-12.00	Dr. Jean-Claude Bidogeza	UniBRAIN	
	13.00-15.30	Mr. James Aucha	ANAFE	ICRAF
16/11/12	09.00-10.00	Mr. James Aucha	ANAFE	ICRAF
	11.00-13.00	Dr. Felister Makini	SVCDC	KARI
	14.30-16.00	Mr. Johnni Kjelsgaard Mr. Ian Lorentzen	AfricaGrowth	Ian Lorenzen, Johnni Kjelsgaard
Uganda	**Time**	**Meeting with**	**Incubator**	**Location/Address**
18/11/12	11.00-13.00	Mr. Alex Ariho	APB	Makerere Universty
19/11/12	10.00-12.00	Dr. James Ssimbuliba	CURAD	Makerere Universty
	14.00-15.00	Dr. James Ssimbuliba	CURAD	Makerere Universty
20/11/12	9.00-10.00	Dr. George Bazirake	ABP	Kyambogo Universty

	10.30-12.00	Dr. Atuheire Godfrey	ABP	Bio-degradable Bags/UIRI
	13.00-15.00	Mr. Joshua Karaire	ABP	Incubator manager
	15.30-16.30	Dr. Jacob Oyogi	ABP	Dean of School of Management and Entrepreneurship, Kyambogo Universty
21/11/12	10.00-12.00	Dr. Georgina Hazina Patrick Patrick	CURAD	NARO-Coffee research institute (COREC) is located in Kituza, Mukono District
	16.00-18.00	Mr Vianney Tumwesige	ABP	Green Heat
22/11/12	10.00-12.00	Mr. Joseph Nkandu and Mr. David Muwonge	CURAD	NUCAFE
22/11/12	14.00-15.30	Dr. William Kyamuhangire	-	Food Tech Incubator MAK
		DR. Johnny Mugisha	-	Dept. of Agribusiness/MAK
23/11/12	14.00-18.00	Dr. George Bazirake	ABP	Entebbe
Zambia	**Time**	**Meeting with**	**Incubator**	**Location/Address**
25/11/12	9.00-11.00	Dr. Mwale Mosse	AgBIT	ZARI – Chilanga
26/11/12	9.00-12.00	Mr. Brian Mwanamambo Mr. Gulam Banda	AgBIT	Frontier Development Associates - Lusaka
26/11/12	14.00-16.00	Dr. Tembo Mr. Denny Sichula	AgBIT	NRDC-Lusaka
26/11/12	17.00-19.00	Dr. Mike Mwala Dr. Benson Chishala	AgBIT	UNZA
27/11/12	10.00-12.00	Mr. Brian Mwanamambo Mr. Gulam Banda	AgBIT	Frontier Development Associates - Lusaka
27/11/12	14.00-15.00	Dr. Njapau	AgBIT	NISIR
28/11/12	10:00-12:00	Prof. Olusegun Adedoyo Yerokun	AgBIT	MU-Kabwe
29/11/12	10:00-12:00	Mrs. Kalobwe Chansa Mrs. Anastazia Muleya	AgBIT	ZDA-Lusaka
29/11/12	14:00-15:00	Dr. Mukombo Tambatamba Mr. Bright Chalwe	AgBIT	National Technology Business Centre (NTBC)

Appendix 2 - Note on potential UniBRAIN-related research activities

(First Draft, 30 Nov 2012)

The aim of this node is to provide input for the collaborative research effort developed in the UniBRAIN context. At the present moment ANAFE, UniBRAIN (Jean-Claude Bidogeza), the six incubators, and University of Copenhagen are all committed to engage in various research activities. In order to optimise the effort and obtain the best possible outputs, possibilities for collaboration should be identified, concretised and coordinated between the partners.

The first step could be an identification of the interests of each partner and development of concrete research designs for identified research questions. Next, a non-complete overview of potential research questions is provided within the following main themes:

1. Incubator configuration and management
2. Entrepreneurs/incubatees
3. Agribusiness education
4. Entrepreneurship education and teaching
5. The UniBRAIN initiative

1. Incubator configuration and management

Topic	Research questions	Participants
Partnership and Governance of tripartite business incubators	Which practices sustain the tripartite business incubation model? What are barriers to collaboration and what facilitate successful incubation? How the partners are kept motivated to contribute? Are different partners' expectations met? Can ABIs' leverage on linkages made through BoDs and other involvement of new partners? PPP experiences in this context.	
Network	What is the structure of each partner's network? How are partners' networks used by the incubator? How large proportions of the networks are activated? Which kinds of networks are more useful for incubators/incubatees? Which mechanisms for inter-organisational learning and knowledge sharing are established? How network coalitions are built to necessary expert groups?	Anika Totojani,
Mentorship	How are mentors recruited? What are they used for? How are they used? How are incubatees and mentors teamed up? What is the incubatees' experience of mentorship? What is the mentors' experience of the incubatees and of being a	

	mentor?	
Customer development	What is the focus on customer development? Which approaches are used to support customer development? How is unique value and competitive advantage created?	
Evaluation of the MICS as a BI management tool	How efficient is the MICS as a management and learning tool in the UniBRAIN type of setting? What are the benefits? What are the barriers?	
Business models of the AIIC	What business models are applied? Who are the customers? How are business models implemented? How do different set-ups contribute to financial sustainability? How do different business models cater for the entrepreneurial environment? How is unique value and competitive advantage created?	Nico Hjortsø,
Incubator service delivery	Which services are delivered by the incubators? How are they delivered? What are the experiences with different types of delivery modes?	
Incubator-incubatee relationship	What kind of interaction exists between incubator management and incubatees? What are the incubatees experiences with the support obtained?	
Incubatee entrepreneurship and business management training	Which explicit or implicit models/approaches do the incubators use for developing entrepreneurial attitudes and skills among incubatees? What results are obtained? Which barriers or promoters characterises the learning process?	
Availability of innovations/ Inventions and their commercialization	Do innovations exists that can be commercialised? What characterises this process from 'shelve' to market place and who plays which roles? How successful are the incubators to stage this process? What influences the process?	
Incubatee selection	Which processes are used for selecting incubatees? What experiences do the incubators and incubatees get with the selection process?	

2. Entrepreneurs/incubatees

Topic	**Research questions**	**Participants**
Individual entrepreneur's behaviour	Which strategies do SMEs and incubatees apply in their business development? Effectuation or causal? Or a mix, an in which situations?	
Student incubatees	What motivates student incubatees? How is the transition from job seeker to job creator best facilitated? What is the success rate of graduate	

	incubatees? Why do they succeed or fail graduating from the incubator program?	
Gender issues	To what extent are UniBRAIN AIICs able to target woman and youth? What are the barriers and promoters of helping these target groups?	
Entrepreneurial learning	How do the incubatees learn? Which processes contribute to their learning? From whom do they learn? Do they learn by copy? Vicarious learning/knowledge transfer? Hands-on training, observation? Who do they learn from? Use of own experiences vs external knowledge during the incubation process?	

3. Agribusiness education

Topic	Research questions	Participants
Tracer study of agribusiness students 2005-2010	What kind of employment have the recent batches of agribusiness students obtained? Which of the skills obtained in the university are they using? Which skills are lacking?	ANAFE
Existing agribusiness education	An overview of the present agribusiness education at the partner universities. How is agribusiness educations organised and delivered? What is the actual content of the programmes? Which teaching methods are used? How many students are enrolled? What is the level of integration with the agribusiness sector? In which department is agribusiness courses placed? What is emphasised in the curriculum: business or agricultural production and processing?	
Integration of experiences with university activities	How are the incubator experiences and their physical framework used by universities to enhance agribusiness education? Can universities absorb the input? How has participation in the incubator influenced attitudes, teaching approaches, curriculum, extra-curricular activities and collaboration with sector stakeholders? How does it benefit the students?	

4. Entrepreneurship education and teaching

Topic	Research questions	Participants
Entrepreneurial attitudes among	Attitudes among agribusiness students – do they actually want to become entrepreneurs? What	

students	can be the barriers and what can facilitate it?	
Status of the present entrepreneurship teaching	Which departments offer entrepreneurship teaching? Course structure and content? Teaching methods? Degree and mode of integration with technical programmes? Perceived advantages and disadvantages with different models?	
Entrepreneurship teaching	What is the present form of entrepreneurship teaching? What kind of teaching approaches could be useful? How would they have to be adjusted to the specific cultural and institutional setting?	

6. The UniBRAIN initiative

Topic	**Research questions**	**Participants**
Programme design and implementation	Descriptive study of the background, the design and the implementation of UniBRAIN. What have we learned from this initiative in terms of donor-sponsored initiation of tripartite business incubator establishment?	Nico Hjortsø,

Appendix 3 - Interview guide for issues surfacing

The purpose of this interview is to identify the potential topics to be addressed in the research to be carried out by different parties in the future.

Interviewees are asked to identify the assumptions, claims, concerns, and issues that concern the participants and they find important for the incubator success, or which they could be interested in learning about by collecting data on throughout the implementation phase

- Which are the issues that you consider important in order for the incubator to become a success?
- What can go wrong that will threaten the success of the incubator?
- What would you define as the critical assumption (LFA) in this project?

Topics that can be used to probe for answers:

- The roles of the partners in the project (private business, NGO, university, research institutes, government) – dedication, input, contribution, performance, …
- Private-public partnership collaboration – challenges, culture, …
- The services provided by the incubator (infrastructure support, business support service, access to networks) – availability, use, quality, …
- Curriculum development at university – changing mindset of students, teachers, and institutional aspects
- The future up-scaling of the incubator model
- The entrepreneurs – behaviour, attitudes, inter-incubatee relations, use of services, …
- The mentors – dedication,
- The agribusiness sector
- The market
- Political and socio-economic environment
- Collaboration and interaction with other UniBRAIN incubators
- Relation to UniBRAIN administration
- Relation to Danida
- …

Appendix 4 - Template for project time line and history

Background

- Africa Commission
- Problems to be addressed
- FARA's involvement
- Preparation process/concept development
- FARA partnership: PanACC, ….

Call – first stage application

- Call formulation (November 2010)
- Awareness rising, meeting at universities in Danida partnership countries
- 51 applications
- Standard format templates
- Evaluation and selection process – selection criteria
- Character of applications
- Role of African Technology Policy Study Network (ATPS)

Second stage application (twelve applications)

- Feedback from UniBRAIN (mid-2011)
- Representatives of the twelve pre-selected meet in Accra. Process, grant, grant committee, intro to ABI-ICRISAT
- Meeting in Nairobi. Purpose, networking, results
- USD 50,000 Seed money – guidelines for use
- Visit to Namibia
- Documents distributed during the phase (project documents and inspirational literature)
- Coordinator visits to incubators (times and purpose)
- What role did FARA/UniBRAIN play in this phase?
- Joint UniBRAIN activities across the six incubators
- Typical need for changes in concepts/applications
- ABI-ICRISAT's engagement, visits, contribution
- Evaluation and selection process – selection criteria
- Character of applications

Final stage refinements (six applications)

- Feedback from UniBRAIN
- Documents distributed during the phase (project documents and inspirational literature)
- Coordinator visits to incubators (times and purpose)
- USD 50,000 Seed money – guidelines for use
- First visit to ABI-ICRISAT in India (Nov 2011?) Hydrabad. Three representatives from each consortium

- Training by InfoDEV
- Second visit to ABI-ICRISAT in India (when?). Network of Indian Agribusiness Incubators (?) New Delhi
- Visit to South Africa (when?). Visit to IMRC (Private Sector Agribusiness Forum), visit to Furnitech (furniture) and Timbali (floriculture) incubators
- Involvement of ABI-ICRISAT in the refinement and adjustment of the consortium's business plan etc. (Aug-Sep 2012)
- Joint UniBRAIN activities across the six incubators
- Activities with other FARA partners?
- The role of ANAFE: objective # 2, curriculum reform, Mombasa meeting, develop contextualized learning material, skills enhancement for lectures, lobby with university leadership, tracer study of agribusiness students 2005-2010, …
- Due diligence process
- Coordination of inputs from ICRISAT (KC, Jonathan), UniBRAIN secretariat, due diligence consultant (Frank)

Implementation

…

Scaling-up UniBRAIN

- How can UniBRAIN become sustainable? Will incubators be able to pay for UniBRAIN services?

Appendix 5 - Business model elements according to AIICs' business plans

African Banana Products Ltd (ABP)	Creating Competitive Livestock-based Entrepreneurs in Agribusiness (CCLEAr)	Agri-Business Incubation Trust limited (AgBIT)
Uganda	**Ghana**	**Zambia**
Type of incubator		
• University-based • Value chains based on banana • Marketing and investment based	• Research institution-based	• Private sector led • Value chain-based agribusiness incubator
Areas of expertise/focus area		
• Banana-based value chains (vacuum packed matooke) • Banana tissue culture seedlings • Fibre products • Renewable energy products • Animal feed	• Poultry (broiler and poultry) • Grasscutter • Piggery	• Tomato • Mango • Pineapple
Revenue streams		
• Generate revenues from commercial production of vacuum sealed matooke (FREVASEMA) and banana fibre based at the ABP production centre in Mbarara (national and export markets) • Revenue sharing of products produced by incubated SMEs in ABP facilities and branded and marketed by ABP • Membership fees from entrepreneurs enrolled at ABP • Rental income on office space at KU and production facility • Technical advisory/transfer service to entrepreneurs in the areas of expertise represented by the founding SMEs • Fee-based training of entrepreneurs in the production units • Technical and business support to spin-offs from universities and research institute • Fee from facilitation of start-ups producing banana tissue culture plants (• Own retail outlets • Income generated from marketing the products of SMEs. • Start -ups will pay facilitation fee to ABP	• Margins on laboratory and diagnostic services, • Business advisory • Services and training, • Commission and margins on product marketing. • Asset sale • Usage fee • Subscription fees • Lending, renting and leasing • Brokerage fees • Advertising	• Membership fee: for entrepreneurs enrolled in AgBIT • Service/facilitation fees: from members/others that obtain services (tech trans, training, • Rental charge: rental income on office space and production facilities • Consultancy fee: percentage of fee paid for consortium members consultancies facilitated by AgBIT • Sales to processors and procurement agencies: commission on sales of AgBIT products • Franchisee outlets or Direct Sales Agents • Technology transfer facilitation fee
Clients		
• Students	• Farmers	• FPO

• Graduates • SMEs • Exports • Niche-Markets • Super stores / Retail stores • Youth associates	• Students • Supermarkets • Hotels and restaurants, • Butchers • University faculty	• RE • SMEs • Innovators • Student start-ups • Franchisee operatives • Food processers • Procurement agencies • Wholesale dealers • Developmental agencies • Government agencies • Input agencies • Funding agencies
Services		
• Commercialization of SMEs products – branding and marketing • Business support to develop SMEs • Training in established technologies in the production centre • Teaching, demonstration and technology transfer by 6th production units • Provide and establish market for the potential incubatees	• Technical production and business advisory services • Feed quality control laboratory services for feed standard maintenance, surveillance in feed quality and analytical services • Microbiology & parasitology laboratory services to address livestock health needs and food safety issues. • Biotechnology laboratory services for research and diagnostics. • Feed formulation and milling services • Hands-on training in dairy processing; modular classes in dairy processing techniques and commercialization • Offer forage conservation training for incubatee farmers to help address dry season feeding problems. • Curriculum review and development • Internships and hand-holding • CCLEAr will assist farmers and District Assemblies to establish individual and community pasture fields and offer quality drought tolerant planting materials. • Credit support services will be given to incubatee farmers.	• Input service package (FPO) • Assured markets (FPO) • Post-harvest management (FPO) • Technology transfer (SME) • Incubation package/Business support (SME) • Branding and marketing (SME) • Risk underwriting (SME) • Franchising (start-up) • Business development (start-up) • Capacity building (start-up) • Legal advice on IP protection • Seed capital to entrepreneurs • Production & quality Control • Infrastructure support • Market development and business facilitation • Facilitate funding
Curriculum development strategy (objective # 2)		
• Students attachments in the production facility in Mbarara or even at Kyambogo Univeristy • ABP will give the Faculty stuff members and the students the hand zone experience (design, fabrication and marketing improved technologies) • Provide soft-landing for students and make them incubators clients (those funds will be generated by other clients)	• Teaching/Training: A well- structured curriculum for each program will be developed for each course /module. Incubatees would have to fulfil appropriate entry requirements before acceptance into the training sessions. Requirements in the form of interviews would be undertaken as appropriate. Emphasis would be placed on practical training. • Internships: Internship programs for students would be	• Attachment/internships with AgBIT value chain • Workshop/agribusiness camps for student entrepreneurs • Consultancies and use of faculty • Mentoring student start-up • Skill set development workshops??

	planned and incubatees would be given appropriate inputs and facilities to ensure effective transfer of knowledge and hands-on practical demonstrations towards experience acquisition. After the teaching/training and internship programs, incubatees would be equipped with start-up packages and other support services.	

(CURAD)	Sorghum Value Chain Development Consortium (SVCDC)	West African Agribusiness Resource Incubator (WAARI)
Uganda	**Ghana**	**Mali**
Type of incubator		
• University-based • Value chains incubator	• Research institution led • Value chains agribusiness incubator	• Private sector led • Value chains incubator
Areas of expertise/focus area		
• Coffee Value Chain Development	• Sorghum-based food, fuel and feed products	• Value chains based on cereals, juice and forest products
Revenue streams		
• Renew will be generated by entrepreneurs membership fee • ELP Charges • Rent and lease • Turn-key consultancy • Business development fee	• Setting up a revolving loan facility for members of the incubator consortium. This will enable them to develop and implement the ideas gained in the incubator. • Collection of alumni Membership fees • Offering short agribusiness oriented training programmes at a cost • Offering advisory services, carrying out feasibility studies, developing business plans and carrying out business appraisal and consultancy for the members at a fee. • Charging fees for incubator website log in • SVCDC will make possible production of quality seeds to fit the different agronomical zones and meet the farmer's seed requirement for food, feed & fuel sorghum crops • Providing business incubation support services to sorghum food, feed, fuel products to new entrepreneurs, students, SMEs • Up-scaling production (sorghum for human food, animal feed, and bio-fuel/alcoholic beverage processing) • Bulking and linkage to niche markets	• Generate revenues from services provided by the Incubator, it's Consultants and Partners • Renting office space
Clients		
• Coffee processing SMEs	• Farmer marketing groups	• SMEs

• Whole sale and retail SME • Farmers association • Students in Makarere (BSc, MSc) • Women entrepreneurs • Food technology scientists • Innovators	• Student start-ups • Student- and researcher based spin-offs • SMEs • Large national and international enterprises operation in Kenya • Rural women • Soft landing of international companies that want to establish themselves in Kenya	• Graduates • Artisans • Women's Groups • Growers/ Farmers • Young entrepreneurs
Services		
• Business development support across entire coffee value chain • Promotion and facilitating setting up of agribusiness enterprises • Training and capacity building • Technology commercialization • Technology transfer • Facilitate funding • Backward linkages with processors, farmers • Business facilitation • Packing and branding • Product promotion • Technology development, Testing and trials • Scale up to other sector and divarication of activities	• Technology support/transfer • Testing and trails • Commercialization • Financing (including seed funding for developing innovations) • Training, capacity building, advisory service • Mentoring/hand holding • Office and building, agricultural land, • Computer & IT enabled aids, • Consultancy service • Business development (including Business plan development) • Post-harvest management (KARI) • Assured markets (KARI) • Match making (Kenyan and international partners) • Co-ordination of research and development • International networking and collaboration • Policy advocacy and market service • Soliciting for grants, seed fiancé and soft loans • Business Incubation Service • Capacity building training and mentoring • Technology transfer and IP policy advice • Branding and marketing (SME) • Risk underwriting (SME) • Franchising (start-up) • Legal advice on IP protection	• The Incubator will offer office space and facilities to its clients on commercial basis tailored to projections of their capacities to pay • Enterprise conceptualization/building (expansion)/ problem solving, business planning, financial advice • Product and/or enterprise development and problem solving support • Supply chain development assistance • Access to market support • Support in accessing investment and operating capital • Assistance in acquiring quality, certification and in design, branding, labelling, selecting packaging marketing and customer development
Curriculum development strategy (objective # 2)		
• Reform and re-orient the BSc, MSc curriculum in the agriculture and agribusiness programs by introducing the "earn while you learn programme". • Provide the students with practical know how, training programs, field attachments, • Provide guest lectures, business dialogues and	• Customization of existing courses on the sorghum value chain along with development of agribusiness courses • Provide modules / content on sorghum value chain courses • Provide lecture and training and orienting students	

networks with industry stakeholders, scientific experts, access to infrastructure and funding. • Gain hands on experience in creating small scale agribusinesses and will empower them to become future agripreneurs	towards entrepreneurship • Student interns for agribusiness clients • Students attached to entrepreneurs in their business for learning • Business plan competitions and provide funding for concept/idea validation and prototype development	